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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/541,631	04/03/2000	Alan Balkany		4315

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EXAMINER

TO, BAOQUOC N

ART UNIT

PAPER NUMBER

2172

DATE MAILED: 09/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/541,631

Applicant(s)

BALKANY, ALAN

Examiner

Baoquoc N To

Art Unit

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. 1-10 are presented for examination.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 04/03/00. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Bugajski (US. Patent No. 5,592,667).

Regarding on claim 1, Bugajski teaches a method for storing a plurality of parallel data element sequences comprising the step of:

(a) creating a dictionary of unique values for each of said data element sequences (dictionary created for each field), whereby each dictionary associates a numeric index with each unique value in the corresponding sequence (each field value is associated with numerical index values...however, leads to the creation of a table of

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associative memories whose two components are indexes to the memory tables of the nodes corresponding to the derivative branches or "children") (col. 9, lines 61);

(b) forming an n-array tree with leaf and interior nodes (terminal or non-terminal nodes) (col. 9, line 61) where:

(1) each leaf node (branches or children) corresponds to one of said dictionaries (dictionary) (col. 9, lines 54-61),

(2) each interior node (each none-leaf or non-terminal node in the tree (such as 105, 108 etc.) associates a numeric index with tuples of numeric indexes from the other subordinate leaf or interior nodes (braches or children) (col. 9, lines 56-61), and

(3) interior nodes (node 108 and 105) may store sequences of unique, mutually-consecutive tuples separately from the other tuples (product date, model year for 105 and vehicle name and plant code for 108) (fig. 1).

Regarding on claim 2, Bugajski teaches each unique value of a leaf node and each unique tuple of an interior node is associated with a count of the number of times that value or implied tuple of values occurred in the parallel data element sequences (col. 4, lines 56-67 and col. 4, lines 1-5).

Regarding on claim 3, Bugajski teaches a means for efficiently processing a subset of a tree's leaves, comprising the following steps:

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(a) the definition of a gate field in interior nodes(each field value associated with a numerical index value) (col. 9, lines 55-59),

(b) setting each of said gate field's values, to indicate which of the corresponding interior node's branches lead to leaf nodes in said subset (children or branches) (col. 9, lines 55-69).

(c) following paths that lead to said leave (col. 12, lines 55-67 and col. 13, lines 1-12), and

(d) processing the leaves encountered (col. 12, lines 55-67 and col. 13, lines 1-12).

Regarding on claim 4, Bugajski teaches selectively disabling separate storage of tuple runs at certain interior nodes (col. 10, lines 60-65).

Regarding on claim 5, Bugajski teaches the method for arranging said n-ary tree comprising the steps of:

(a) defining a problem space consisting of:

(1) a set of states such that each state contains a set of leaves and zero or more interior nodes, each with two or more other nodes as children (col. 9, lines 54-57),

(2) a value function, giving a numeric ranking of the value of any state's design (col. 9, lines 54-57),

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(b) defining one or more operators that transform one state to another (col. 9, lines 54-57), and

(c) searching the problem space, starting from an initial state and applying operators to move to other states until a state with an acceptable design is reached (col. 9, lines 54-57).

Regarding on claim 6, Bugajski teaches a method for storing a plurality of parallel data element sequences comprising the steps of:

(1) creating a dictionary of unique values for each of said data element sequences, whereby each dictionary associates a numeric index with each unique value in the corresponding sequence (each field value is associated with numerical index values...however, leads to the creation of a table of associative memories whose two components are indexes to the memory tables of the nodes corresponding to the derivative branches or "children") (col. 9, lines 61); ,

(2) each interior node (each none-leaf or non-terminal node in the tres (such as 105, 108 etc.) associates a numeric index with tuples of numeric indexes from other terminal or non-terminal nodes (branches or children) (col. 9, lines 56-61).

Regarding on claim 7, Bugajski teaches each unique values of a leaf node and each unique tuple of an interior node is associated with a count of the number of time that value or implied tuple of values occurred in the parallel data element sequences (col. 4, lines 56-67 and col. 4, lines 1-5).

Regarding on claim 8, Bugajski teaches a means for efficiently processing a subset of a tree's leaves, comprising the following steps:

- (a) the definition of a gate field in interior nodes (each field value associated with a numerical index value) (col. 9, lines 55-59),
- (b) setting each of said date fields' values, to indicate which of the corresponding interior node's branches lead to leaf nodes in said subset (children or branches) (col. 9, lines 55-69).

Regarding on claim 9, Bugajski teaches an additional tree, t, is created using s subset of the same fields of the first tree, f, comprising:

- (a) finding a ancestor node in tree f, of the leaf nodes in f corresponding to said subset of fields (104. fig. 1);
- (b) looking up the tokens of said leaf nodes corresponding to a subset of tokens in said ancestor (col. 9, lines 55-60);
- (c) inserting said leaf node token into tree, t (col. 10, lines 5-10).

Regarding on claim 10, Bugajski teaches the method for arranging said n-ary tree comprising the steps of:

- (a) defining a problem space consisting of:

(1) a set of states such that each state contains a set of leaves and zero or more interior nodes, each with two or more other nodes as children (col. 9, lines 54-57),

(2) a value function, giving a numeric ranking of the value of any state's design (col. 9, lines 54-57),

(b) defining one or more operators that transform one state to another(col. 9, lines 54-57), and

(c) searching the problem space, starting from an initial state and applying operators to move to other states until a state with an acceptable design is reached (col. 9, lines 54-57).

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is (703) 305-1949 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached at (703) 305-4393.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231.

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The fax numbers for the organization where this application or proceeding is assigned are as follow:


- (703) 746-7238 [After Final Communication]
- (703) 746-7239 [Official Communication]
- (703) 746-7240 [Non-Official Communication]

Hand-delivered responses should be brought to:

Crystal Park II
2121 Crystal Drive
Arlington, VA 22202
Fourth Floor (Receptionist).

Baoquoc N. To

September 20, 2003


SHAHID ALAM
PRIMARY EXAMINER